

**SITUATION REPORT
INCIDENT COMMAND POST GOLD KING
GOLD KING MINE RELEASE INCIDENT
U.S. ENVIRONMENTAL PROTECTION AGENCY**



Gladstone tiered solid dewatering pad (Geotube area) with treatment system in background, 25 October 2015.

Subject: EXECSUM / SITREP #47
Gold King Mine Release Incident
San Juan County, Colorado
Latitude: 37.8945 Longitude: -107.6384

From: Situation Unit, Incident Command Post Gold King
Date: 27 October 2015
Reporting Period: 0700 20 October 2015 through 0700 27 October 2015
Website: www.epa.gov/goldkingmine



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EXECUTIVE SUMMARY

Situation Summary

As of Friday, 23 October 2015, Incident Command Post Gold King (ICPGK) was closed. Management of the Gold King Mine Release incident has been transitioned to EPA Region 8.

Highlights, Key Updates/Changes

- EPA Region 8 continues to work through action items identified as part of the transition of operations to EPA Region 8.
- EPA Region 8 continues to focus on residential sampling data reviews and sending letters to residents.

Objectives

- Ensure health and safety of the public and responders.
- Continue private water deliveries to homes with Primary MCL Exceedances.
- Continue to facilitate transition of cooperative agreements between San Juan Basin Health Department (SJBHD), Colorado Department of Public Health and Environment (CDPHE), and Colorado Office of Emergency Management (OEM) to EPA Region 8.
- Continue to work through action items identified as part of the transition of operations to EPA Region 8.
- Continue coordination with federal, state, tribal and local stakeholders.
- Prepare for future sampling activities that will be completed in accordance with the Long-term Monitoring Plan.
- Mine Operations
 - Continue management of mine water discharge.
 - Gold King Mine water is currently flowing through the Gladstone Ponds en route to the water treatment system.
 - System is fully operational treating between 550 to 600 gallons per minute (gpm).
 - The tiered solid dewatering pad (Geotube area) is operational.
 - Final grading is in progress around the ponds and access road.
 - Winterization activities on the treatment system are in progress. Once winterization of the system is complete in approximately mid-November 2015, mine operations will transition to a winter operations period. Follow up actions to be conducted in the Spring will be determined over the winter during the system operation period.

Command Emphasis

For this operational period, the command emphasis is:

- Safety of responders and the public
- Visitors to the mine site are required to go through a safety briefing. See Mine Site Safety Plan.
- Personnel entering Southern Ute Tribal lands must be escorted by a Southern Ute staff member.
- Ensure information flow between ICP and Stakeholders is transparent.

The metrics provided in this Situation Report represent quantities reported for work completed from 0700 20 October 2015 through 0700 27 October 2015. Press releases are presented in Attachment 1.



1.0 BACKGROUND

The Gold King Mine (GKM) near Silverton, Colorado is an historic gold mine at an elevation of approximately 11,300 feet above mean sea level. The mine discharge includes acidic mine drainage that is a contributor of heavy metals into the Cement Creek drainage of the Animas River watershed. The GKM workings have been inaccessible since 1995 when the mine portal collapsed.

On 5 August 2015, up to three million gallons (estimated) of water containing sediment and dissolved metals was suddenly released from the Gold King Mine adit. This water discharged into Cement Creek which feeds into the Animas River, and eventually flows into the San Juan River.

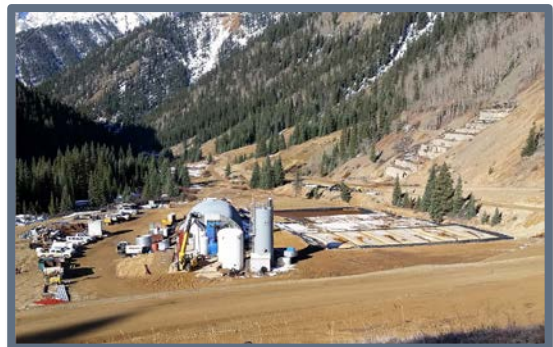
US EPA Region 8 continues to assess and mitigate effects from the release.

2.0 OPERATIONS

2.1 Mine Operations

A summary of mine operations is presented below.

- Water from Gold King Mine is being routed by discharge pump directly to the Gladstone Ponds en route to the water treatment system.
- The water treatment system is fully operational and treating water at a flow rate between 550 and 600 gpm.
- The tiered solid dewatering pad (Geotube area) is operational.
- Final grading is in progress around the ponds and access road.



Gladstone treatment system in operation
(25 October 2015).

- System calibration and equipment testing will likely continue for another week to optimize system operation.
- Winterization of the treatment system is currently in progress. Winterization will continue until approximately mid-November 2015.
- Mucking out of the first 55 feet of the Gold King Mine adit is largely complete.
- Channel restoration and re-vegetation activities continue on Cement Creek and North Fork Cement Creek.
- Water quality parameters continued to be collected at 03 locations two times daily. Locations include:
 - Cement Creek(CC20) --250 ft upstream of the confluence with South Fork
 - Cement Creek(CC03B)---1000 ft upstream from the confluence with North Fork Cement Creek
 - Interim Gladstone Treatment System Discharge (GSTO)---100 ft upstream of CC20



- START personnel are conducting periodic pH readings to monitor treatment operations at pond discharge locations and at 250 ft upstream of the confluence of the South Fork of Cement Creek (CC20).

2.2 River Sampling

On 13 October 2015, the final round of surface water and sediment sampling was completed according to the Interim Demobilization Plan. Future sampling activities will be completed according to the Long-Term Monitoring Plan. Operational activities for surface water and sediment sampling are summarized below. Sample quantities are based on the SCRIBE database, and include field samples and quality assurance/quality control (QA/QC) samples.

Table 1 - Operations Sampling Summary									
Matrix	U.S. EPA Region	Quantity							
		October 2015							Cumulative
		20	21	22	23	24	25	26	
Surface Water Samples	8	0	0	3	0	0	0	0	691
	6	0	0	0	0	0	0	0	561
	9	0	0	0	0	0	0	0	310
	Total	0	0	3	0	0	0	0	1,562
Sediment Samples	8	0	0	0	0	0	0	0	349
	6	0	0	0	0	0	0	0	553
	9	0	0	0	0	0	0	0	256
	Total	0	0	0	0	0	0	0	1,158

2.3 Private Well Sampling

U.S. EPA has collected and analyzed samples from drinking water wells located near the Animas River and San Juan River. There has been no sampling of private drinking water wells in U.S. EPA Region 9.

Private well samples that have metals concentrations greater than the Maximum Contaminant Levels (MCLs) and were collected from private drinking water wells during the first sampling event were sampled a second time to confirm the analytical results. In Region 8, the second round of samples at a given property were collected from the tap. Residents that have MCL exceedances have been notified.

A summary of private drinking water well sampling during this operational period is presented below.

Table 2 – Private Drinking Water Well Sampling Summary									
Matrix	U.S. EPA Region	Quantity							
		October 2015							Cumulative
		20	21	22	23	24	25	26	
Private Drinking Water Well Samples Collected (from SCRIBE, includes QA/QC samples)	8	0	0	0	0	0	0	0	449
	6	0	0	0	0	0	0	0	309

Notes: Some residents were sent multiple results letters

Some residential sampling included surface water and/or sediment sampling.



Table 3- Summary of Wells with MCL Exceedances

Matrix	U.S. EPA Region	Cumulative
Wells containing contaminant concentrations above MCLs during second sampling event	8	4
	6	1*

*Note: One well in Region 6 exceeded the MCL for lead and after further assessment by the State of New Mexico and the U.S. EPA, it was determined that the exceedance was not related to the GKM incident.

2.4 Mitigation Activities

No public water systems are currently affected by the release or response operations. ICPGK continues to coordinate and deliver bottled drinking water to **4** residences in Region 8. Other public support activities completed are summarized below.

Table 4 – Completed Public Support (Cumulative)

Activity	U.S. EPA Region	Qty. (gal)	Qty. (hay bales)	Qty. (salt blocks)
Potable Water Deliveries	8	105,600		
Livestock / Agricultural Water Deliveries	8	133,770		
	6	1,104,990		
Agricultural Food Deliveries	6		244	
Agricultural Salt Block Deliveries	8			500

During the previous reporting period, US EPA Region 9 delivered 500 salt blocks to the Navajo Nation's Shiprock Chapter's Maintenance Center for distribution to ranchers and farmers. No additional agricultural food, water or salt block deliveries are currently scheduled for Navajo Nation.

Ongoing public support activities are summarized below:

Table 5 – Ongoing Public Support

Activity	Entity	20 Oct – 27 Oct 2015			Cumulative		
		Deliveries (each)	Qty. (gal)	Qty. (hay bales)	Deliveries (each)	Qty. (gal)	Qty. (hay bales)
Livestock / Agricultural Water Deliveries	U.S. EPA R9	0	0		13	218,400	
	BIA	0	0		7	975,888	
Agricultural Food Deliveries	U.S EPA R9	0		0	22		8,448

2.4.1 Water Tanks

On or about 15 August 2015, 15 black steel tanks (16,500 gallon capacity each) were delivered by the ERRS contractor to certain locations on the Navajo Reservation as part of the response to the Gold King Mine release incident. All 15 of the water tanks have been removed from the Navajo Reservation.

2.4.2 Other Mitigation Activities

No other activities reported.



3.0 PLANNING

3.1 Environmental Unit

EPA Region 8 is continuing to prepare letters containing analytical results for private properties where U.S. EPA collected sediment and/or drinking water samples. A summary of private letters sent is provided below:

Table 6- Private Letter Summary as of 19 October 2015			
Approximate Total Number of Letters to be Sent	Letters Sent Prior to This Reporting Period	Letters Sent During This Reporting Period	Approximate Number of Remaining Letters to be Sent
431	418	10	3

3.2 Resources

The table below summarizes staffing numbers for the federal entities and agencies active in the response.

Table 7 - Personnel On-Site								
Location	Agency / Entity	October 2015						
		20	21	22	23	24	25	26
Mine Operations	U.S. EPA	2	3	2	2	2	2	1
	USCG	2	2	2	2	2	2	2
	U.S. EPA Contractors	28	34	28	31	23	17	32
	Visitors	10	0	1	0	0	0	0
Total		42	39	33	35	27	21	35

USCG = U.S. Coast Guard; Other = federal, state, local and tribal entities

4.0 FINANCE

4.1 Estimated Response Costs to Date

The table below summarizes estimated costs for the response as of 19 October 2015.

Table 8 - Estimated Response Costs Reported as of 19 October 2015					
U.S. EPA Region	U.S. EPA Cumulative Expended Payroll	U.S. EPA Cumulative Expended Travel	U.S. EPA Cumulative Other Charges	U.S. EPA Cumulative Contractors Cost	Total Cumulative Costs
8	\$1,156,702	\$287,991	\$46,109	\$7,654,285	\$9,145,087
6	\$612,983	\$152,350	\$12,989	\$2,623,463	\$3,401,785
9	\$282,855	\$72,661	\$0	\$2,442,671	\$2,798,187
Total	\$2,052,540	\$513,002	\$59,098	\$12,720,419	\$15,345,059

4.2 Estimated Burn Rates

The table below summarizes current estimated burn rates for the response.



Table 9 - Estimated Daily Burn Rates as of 19 October 2015	
U.S. EPA Region	Estimated Average Daily Burn Rate
8	\$78,100
6	\$2,500
9	\$8,920
Total	\$89,520

5.0 LOGISTICS

Logistics completed demobilization of the ICPGK facility in Durango, Colorado during this reporting period. ICPGK was closed on Friday, 23 October 2015.

6.0 SAFETY

No recordable injuries or illnesses were reported during this operational period.

7.0 PUBLIC INFORMATION

7.1 Community Engagements and Public Events

Community engagements and public events that occurred during this period included:

- Transition conference call between EPA Region 8 management team and local stakeholders (Wednesday, 21 October 2015).

A summary of community engagements is provided below:

Table 10 – Community Engagement Summary								
Description	U.S. EPA Region	October 2015						
		20	21	22	23	24	25	26
Community Engagement	8	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0

7.2 VIPs/Congressional Visits

7.2.1 Occurred Events

VIP / Congressional visits that occurred during this period include:

- None.

7.2.2 Anticipated Events

Known site visits and public events scheduled for the next 14 days are summarized below.

Table 11 - Anticipated Site Visits and Public Events Summary	
Planned Event	Anticipated Date
Animas River Stakeholders Meeting	27 OCT 2015

7.3 Call Center / Notification Plan

U.S. EPA Headquarters continues to operate a national call center (844-607-9700).

Management of the Gold King Mine Stakeholder Alert and Notification Plan has been transitioned to the



EPA Region 8 call-in number. A "Notification" was sent out on the afternoon of Wednesday, 20 October 2015, to address a turbidity event in Cement Creek caused by precipitation. The turbidity event lasted approximately two hours. The "Notification" was also used as an exercise to notify the transfer of Alert/Notifications from IC Durango to the Region 8 Phone Duty OSC.

8.0 LIAISON

Federal, regional, local and other entities participating in the response are summarized below.

U.S. EPA
U.S. Coast Guard (USCG)
U.S. Geological Survey (USGS)
U.S. Army Corps of Engineers (USACE)
U.S. Bureau of Reclamation (USBOR)
U.S. Fish and Wildlife Services (USFWS)
Colorado Office of Emergency Management (OEM)
Colorado Department of Public Health and Environment (CDPHE)
New Mexico Environment Department (NMED)
New Mexico (NM) Department of Health
NM Office of the State Engineer
NM Department of Game and Fish
State of Utah
State of Arizona
City of Durango
La Plata County
San Juan County
San Juan Basin Health Department
County of San Juan – New Mexico
Southern Ute Indian Tribe (SUIT)
Navajo Nation

9.0 SOURCE OF ADDITIONAL INFORMATION

For additional information, refer to www.epa.gov/goldkingmine.



ATTACHMENT 1
PRESS RELEASES



PRESS RELEASE #1

Gold King Mine Data, October 23, 2015

[Free viewers may be needed to access information linked on this page.](#)

[Data from Gold King Mine Response](#)

Surface water and sediment concentrations are now below recreational screening levels. The river system as a whole is being maintained at pre-event conditions.

It is important to keep in mind that metal concentrations in water and sediment may fluctuate.

Fluctuations occur because of weather and other events that change water flow rates or volume. They can also occur if sediments are accumulating at a higher than normal rate at a particular site, before being washed away by the next high water event.

As the response to the mine release transitions to long-term evaluations, EPA will continue to monitor for any abnormal occurrences of metal concentration exceedances of risk-based screening levels.

EPA surface water samples collected on October 8th, 9th and 14th from locations along the Animas River in New Mexico.

Open or download the data file: [Region 6 Surface Water Summary Table 10182015 \(XLSX\)](#)(1 pg, 99 K)

EPA sediment samples collected on October 8th, 9th and 14th from locations along the Animas River in New Mexico.

Open or download the data file: [Region 6 Sediment Summary Table 10152015 \(XSLX\)](#)(1 pg, 55 K)